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Jan. 1930

DAIRY CATTLE BREEDS



SEVERAL BREEDS of cattle in the United States are recognized as dairy breeds. Although much alike in what is known as general dairy conformation, these breeds differ to some extent in certain characteristics. What these characteristics are, the factors to consider in selecting a breed, and the history of the origin and development of the breeds are questions of interest to both the beginner and the established breeder of dairy cattle. These are the topics discussed in this bulletin.

This bulletin supersedes Farmers' Bulletin 893, Breeds of Dairy Cattle.

Washington, D. C.

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DAIRY CATTLE BREEDS

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DAIRY CATTLE IN THE UNITED STATES

ACCORDING to estimates made by the United States Department of Agriculture there were about 33,000,000 dairy cattle of all ages in the United States on January 1, 1929. Three per cent of these cattle, or about 1,000,000, are purebred, and represent six breeds, namely, Ayrshire, Brown Swiss, Dutch Belted, Guernsey, Holstein-Friesian, and Jersey. The improvement that must be made in the 97 per cent that are not purebred must come largely from the 3 per cent that are purebred. Likewise, any increase in the number of our purebred dairy cows, and even the maintenance of our grade dairy herds at their present number and efficiency, will be accomplished principally through the use of purebred bulls. For these reasons purebred dairy cattle have played in the past and will play in the future a very important rôle in the dairy industry of the Nation.

NUMBER AND DISTRIBUTION OF BREEDS

Tables 1 and 2 show the number and distribution of the various breeds in the United States, by sections and by States. The information in Table 1, showing total number of each breed on January 1, 1920, was brought out by an inquiry sent to 14,000 special livestock reporters of the branch then known as the Bureau of Markets and Crop Estimates of the United States Department of Agriculture. Grades and scrubs were listed with the respective breeds to which they seemed to belong.

Table 2 shows the number of registered purebreds of the dairy breeds on January 1, 1920, as ascertained by the census.

Table 3 gives the average annual production of milk and butterfat of the cows having official yearly records in the breed associations.

TABLE 1.—*Estimated number and percentage of cattle of dairy breeds, including purebreds and grades, in the United States, January 1, 1920, by sections*

| Breed | Total | United States | North Atlantic States | North Central, East | North Central, West | South Atlantic States | South Central States | Far West |
|------------------------|---------------|-----------------|-----------------------|---------------------|---------------------|-----------------------|----------------------|-----------------|
| | <i>Number</i> | <i>Per cent</i> | <i>Per cent</i> | <i>Per cent</i> | <i>Per cent</i> | <i>Per cent</i> | <i>Per cent</i> | <i>Per cent</i> |
| Ayrshire..... | 412,000 | 1.8 | 5.8 | 0.8 | 1.9 | 0.7 | ----- | 0.8 |
| Brown Swiss..... | 170,000 | .7 | .5 | 1.3 | 1.3 | .3 | ----- | .4 |
| Dutch Belted..... | 157,000 | .7 | .5 | .2 | .6 | .3 | 2.3 | ----- |
| Guernsey..... | 1,995,000 | 8.5 | 10.6 | 12.1 | 11.9 | 8.4 | 1.3 | 5.1 |
| Holstein-Friesian..... | 11,069,000 | 47.4 | 65.3 | 56.2 | 54.3 | 21.1 | 17.3 | 58.9 |
| Jersey..... | 9,554,000 | 40.9 | 17.3 | 29.4 | 30.0 | 69.2 | 79.1 | 34.8 |
| Total..... | 23,355,000 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

TABLE 2.—*Purebred (registered) cattle of the dairy breeds on farms in 1920, by States and sections, as shown by the census*

| Division and State | Total | Ayr-shire | Brown Swiss | Guernsey | Holstein-Friesian | Jersey | All other breeds ¹ |
|---------------------------|---------|-----------|-------------|----------|-------------------|---------|-------------------------------|
| United States..... | 916,602 | 30,509 | 8,283 | 79,446 | 528,621 | 231,834 | 37,909 |
| Geographic divisions: | | | | | | | |
| New England..... | 85,724 | 9,780 | 349 | 10,311 | 42,721 | 20,305 | 2,258 |
| Middle Atlantic..... | 239,764 | 12,883 | 1,904 | 21,114 | 171,124 | 25,815 | 6,924 |
| East North Central..... | 289,859 | 3,735 | 4,199 | 29,640 | 185,475 | 57,167 | 9,643 |
| West North Central..... | 106,967 | 1,859 | 1,386 | 8,250 | 62,055 | 23,697 | 9,720 |
| South Atlantic..... | 49,119 | 519 | 43 | 5,949 | 15,445 | 25,245 | 1,918 |
| East South Central..... | 34,651 | 27 | 2 | 298 | 5,902 | 27,024 | 1,397 |
| West South Central..... | 43,268 | 60 | 13 | 263 | 9,724 | 30,650 | 2,558 |
| Mountain..... | 22,534 | 324 | 146 | 638 | 12,689 | 6,926 | 1,611 |
| Pacific..... | 44,716 | 1,322 | 240 | 2,783 | 23,486 | 15,005 | 1,880 |
| New England: | | | | | | | |
| Maine..... | 15,683 | 1,134 | 62 | 1,836 | 7,206 | 4,999 | 446 |
| New Hampshire..... | 10,750 | 1,214 | 75 | 1,151 | 6,695 | 1,348 | 630 |
| Vermont..... | 28,549 | 3,808 | 59 | 2,193 | 13,413 | 8,446 | 267 |
| Massachusetts..... | 18,807 | 1,880 | 80 | 3,348 | 10,006 | 2,904 | 589 |
| Rhode Island..... | 1,651 | 494 | | 217 | 542 | 351 | 47 |
| Connecticut..... | 10,284 | 1,250 | 73 | 1,566 | 4,859 | 2,257 | 279 |
| Middle Atlantic: | | | | | | | |
| New York..... | 153,037 | 9,521 | 1,347 | 9,749 | 114,662 | 13,411 | 4,347 |
| New Jersey..... | 11,538 | 265 | 23 | 1,747 | 7,810 | 1,368 | 325 |
| Pennsylvania..... | 75,189 | 3,097 | 534 | 9,618 | 48,652 | 11,036 | 2,252 |
| East North Central: | | | | | | | |
| Ohio..... | 70,882 | 1,021 | 324 | 4,960 | 38,327 | 23,842 | 2,408 |
| Indiana..... | 21,115 | 509 | 131 | 1,215 | 8,477 | 9,921 | 862 |
| Illinois..... | 36,412 | 202 | 1,385 | 1,369 | 25,124 | 7,317 | 1,015 |
| Michigan..... | 46,533 | 291 | 429 | 3,369 | 32,702 | 8,296 | 1,446 |
| Wisconsin..... | 114,917 | 1,712 | 1,930 | 18,727 | 80,845 | 7,791 | 3,912 |
| West North Central: | | | | | | | |
| Minnesota..... | 32,668 | 399 | 483 | 4,468 | 22,830 | 2,508 | 1,980 |
| Iowa..... | 20,286 | 271 | 447 | 1,716 | 10,916 | 3,629 | 3,307 |
| Missouri..... | 19,037 | 110 | 135 | 760 | 5,569 | 10,708 | 1,755 |
| North Dakota..... | 4,797 | 226 | 25 | 346 | 2,937 | 481 | 784 |
| South Dakota..... | 5,248 | 85 | 119 | 135 | 4,027 | 312 | 570 |
| Nebraska..... | 7,873 | 74 | 38 | 348 | 5,368 | 1,275 | 770 |
| Kansas..... | 17,058 | 694 | 141 | 477 | 10,408 | 4,784 | 554 |
| South Atlantic: | | | | | | | |
| Delaware..... | 1,691 | 1 | | 246 | 1,245 | 172 | 27 |
| Maryland..... | 8,668 | 113 | 9 | 1,867 | 4,073 | 2,323 | 283 |
| District of Columbia..... | 186 | | | 1 | 175 | 10 | |
| Virginia..... | 9,586 | 25 | | 1,696 | 4,160 | 3,223 | 482 |
| West Virginia..... | 4,450 | 272 | 32 | 333 | 1,134 | 2,546 | 133 |
| North Carolina..... | 7,097 | 44 | 1 | 789 | 1,613 | 4,978 | 272 |
| South Carolina..... | 5,184 | 4 | | 644 | 1,008 | 3,389 | 139 |
| Georgia..... | 8,727 | 14 | 1 | 305 | 1,700 | 6,224 | 483 |
| Florida..... | 2,930 | 46 | | 68 | 337 | 2,380 | 99 |
| East South Central: | | | | | | | |
| Kentucky..... | 8,829 | 20 | | 40 | 2,046 | 6,421 | 302 |
| Tennessee..... | 11,347 | 2 | 1 | 111 | 1,383 | 9,424 | 426 |
| Alabama..... | 6,108 | 4 | 2 | 46 | 1,142 | 4,608 | 306 |
| Mississippi..... | 8,367 | 1 | | 101 | 1,331 | 6,571 | 363 |
| West South Central: | | | | | | | |
| Arkansas..... | 6,950 | 3 | 1 | 19 | 2,001 | 4,627 | 299 |
| Louisiana..... | 3,415 | 1 | 2 | 94 | 1,009 | 2,201 | 108 |
| Oklahoma..... | 9,539 | 37 | 3 | 91 | 3,741 | 5,104 | 563 |
| Texas..... | 23,364 | 19 | 7 | 59 | 2,973 | 18,718 | 1,588 |
| Mountain: | | | | | | | |
| Montana..... | 3,451 | 13 | 54 | 176 | 2,453 | 560 | 195 |
| Idaho..... | 4,138 | 46 | 48 | 197 | 2,049 | 1,579 | 219 |
| Wyoming..... | 1,071 | 21 | 14 | 31 | 747 | 167 | 91 |
| Colorado..... | 6,448 | 114 | 30 | 241 | 4,057 | 1,605 | 401 |
| New Mexico..... | 1,327 | | | 42 | 438 | 507 | 340 |
| Arizona..... | 2,772 | 109 | | 48 | 1,778 | 669 | 168 |
| Utah..... | 2,922 | | | 93 | 970 | 1,706 | 153 |
| Nevada..... | 405 | 21 | | 10 | 197 | 133 | 44 |
| Pacific: | | | | | | | |
| Washington..... | 12,720 | 404 | 69 | 941 | 7,673 | 3,402 | 231 |
| Oregon..... | 12,852 | 323 | 135 | 697 | 3,624 | 7,771 | 302 |
| California..... | 19,144 | 595 | 36 | 1,145 | 12,189 | 3,832 | 1,347 |

¹ Including animals reported as purebred, but with breed not specified.

TABLE 3.—Average yearly production of milk and butterfat of the cows of different breeds that have official yearly records

| Breed | Cows and heifers | To what date | Milk | Butterfat | |
|------------------------|------------------|--------------|---------------|---------------|-----------------|
| | | | | Quantity | Test |
| | <i>Number</i> | | <i>Pounds</i> | <i>Pounds</i> | <i>Per cent</i> |
| Ayrshire..... | 8,004 | Jan. 1, 1929 | 10,393 | 415.0 | 3.99 |
| Brown Swiss..... | 530 | do..... | 12,813 | 512.7 | 4.00 |
| Dutch Belted..... | 62 | do..... | 10,035 | 384.3 | 3.83 |
| Guernsey..... | 27,210 | do..... | 9,775 | 488.1 | 4.99 |
| Holstein-Friesian..... | 31,392 | do..... | 16,070 | 544.5 | 3.38 |
| Jersey..... | 37,875 | do..... | 8,466 | 453.1 | 5.35 |

WHAT IS A DAIRY BREED?

The term "dairy breed" has been accepted by stockmen and investigators as referring to the breeds of cattle that are especially well fitted for the production of milk and butterfat. Such breeds represent the efforts made by breeders of many generations toward improving the milking capacity of certain classes of cows. Because of this fact the inherent tendency of purebred dairy cattle to produce milk is greater than that of a native or unimproved cow. This inherent capacity is transmitted to the offspring. As a result, the mating of a purebred dairy animal with a native or scrub produces a grade animal which is superior to the scrub in production and in other dairy characteristics.

A purebred dairy animal is one that meets the requirements for registration laid down by the association for that breed in the United States. A grade is the offspring resulting from mating a purebred with a scrub, or from mating animals not purebred but having close purebred ancestors. The offspring of a purebred and a grade is also a grade, and through progressive improvement such animals become high grade. The names of the breeds (Ayrshire, Brown Swiss, etc.) may refer to either purebreds or grades; but to prevent misunderstanding it is desirable to precede the breed name with the word "purebred" or "grade."

In addition to the breeds of dairy cattle mentioned, certain other breeds having good milking qualities are kept for dairy purposes. Such cattle, which are often referred to as dual-purpose animals because of their ability to produce satisfactory carcasses as well as a good milk flow, include the Shorthorn, Red Polled, and Devon. The qualities of these are discussed in Farmers' Bulletin 612, "Breeds of Beef Cattle."

REGISTRATION

A purebred dairy animal is one whose sire and dam are eligible to be recorded by name and number in a register of the breed, commonly called the herdbook. An animal thus qualified may itself be recorded in the same herd register, provided the sire and dam are registered, and provided it also qualifies with regard to color. Additional rules and requirements for registration are laid down by the various breed organizations. Copies of these rules may be obtained by writing to the associations concerned, as listed on page 30 of this bulletin.

In addition to the herd register, there is for each breed another register in which are entered the names of purebred cows that have

completed records meeting specified requirements of milk and butterfat production under definite regulations. Bulls that have a certain number of tested daughters are also recorded in this register. This record of tested cows and proved bulls is called by various names—Advanced Registry for the Ayrshires and Dutch Belted, Register of Production for the Brown Swiss, Advanced Register for the Guernseys and Holsteins, and Register of Merit for the Jerseys.

The requirements for admission to this special register of production and the rules under which the records are made vary somewhat with different breeds. Detailed information on this point may be obtained from the breed associations concerned.

WHICH BREED TO SELECT

Sometimes too much emphasis is given to the question which breed to choose, and too little to the matter of getting good individuals—that is, those that are well bred and high producers. There are three points, however, that should be considered in deciding which breed to select. These are: (1) The breed that predominates in the locality where the new herd is to be located, (2) personal preference, and (3) market requirements for the product.

THE BREED THAT PREDOMINATES

A dairyman just starting with purebreds may feel that since all his neighbors have one breed of cattle, he should get another breed so as to have a monopoly in the business of selling breeding stock. There is no question about the monopoly, but there would probably be no business to monopolize. It is difficult for an isolated small breeder to dispose of his surplus stock to advantage, while if there are many breeders with the same breed buyers are attracted to the locality because of the better chance to get the desired animals from one or more of the several breeders.

There are other advantages to a dairyman in having the same breed as his neighbor, such as the possibility of exchanging bulls, and of owning good purebred bulls cooperatively. These advantages are obtained by those having grade herds as well as by those with purebreds. Then there is also the opportunity for taking advantage of special breed sales of surplus stock, and, lastly, the advantage of bringing the community together in other endeavors which usually result where there is but one breed.

PERSONAL PREFERENCE

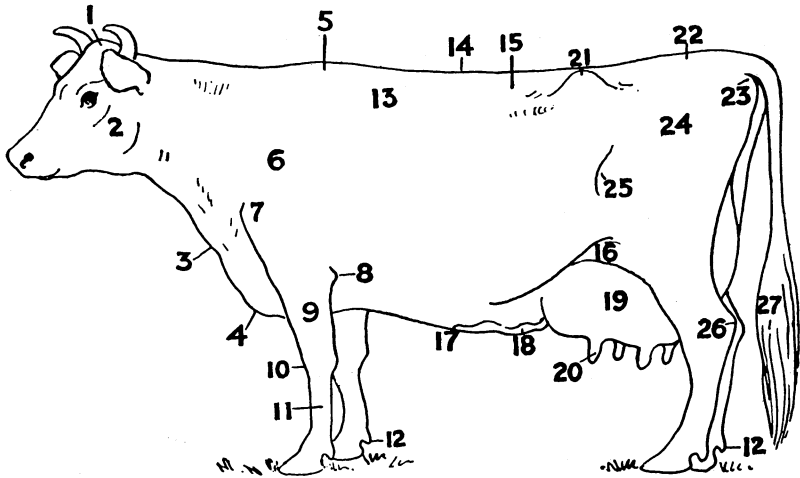
In a district where no breed is established, or in sections where all the different breeds are about equally represented, the prospective breeder must be guided largely by his personal preference. A person usually takes a liking to one breed, for reasons not easily explainable. Naturally he would take more interest in caring for animals of that breed than for those of a breed that he does not like so well.

Personal preference, however, must not overshadow the matter of quality of individual animals. If high-producing individuals of the breed not so well liked are available at reasonable cost, and individuals of the same quality of the breed well liked are not available except at a much higher cost, it may be wiser to select the former, for usually a dairyman soon begins to like a breed with which he is doing well.

MARKET REQUIREMENTS FOR PRODUCT

Market requirements for the product should not be overemphasized in selecting the breed. For a time a dairyman may sell his product in a market where low-testing milk has the advantage, while later the conditions may be changed, and a high-testing milk will sell to better advantage. Obviously, a breeder can not shift from one breed to another to meet the fluctuations in market demands.

When selling to a city milk plant, however, the price paid for the extra butterfat over the basic test, or deducted from the standard



- | | | |
|----------------------|---------------|---------------|
| 1. POLL | 10. KNEE | 19. UDDER |
| 2. JAW | 11. SHANK | 20. TEAT |
| 3. DEWLAP | 12. DEW CLAW | 21. HIP POINT |
| 4. BRISKET | 13. CROP | 22. RUMP |
| 5. WITHERS | 14. CHINE | 23. PIN BONE |
| 6. SHOULDER | 15. LOIN | 24. THURL |
| 7. POINT OF SHOULDER | 16. FLANK | 25. STIFLE |
| 8. POINT OF ELBOW | 17. MILK WELL | 26. HOCK |
| 9. FOREARM | 18. MILK VEIN | 27. SWITCH |

FIG. 1.—Diagram of cow showing names and location of parts

price when the milk is below basic test, may well be considered in selecting the breed. The point here is that sometimes in some whole-milk markets the differential may favor high-testing milk, and at other times or in other markets it may favor low-testing milk.

In summing up the matter of which breed to select this point should be kept in mind—there are good cows and poor cows in all breeds, and other things being equal, the breeder or dairyman who gets good individuals to begin with will have a good chance for success no matter what breed he selects.

THE SCORE CARD

Each breed association has a scale of points, or score card, for bulls and cows of that breed. The card gives definite values for the various characteristics of conformation, and emphasizes points requiring special attention from breeders. The purpose of the score card is to teach beginners the art of judging, and also to encourage the formation of what is considered by breeders, through their associations, as the ideal type. It tends to make the breed uniform in appearance. The scale of points for a cow is given in this bulletin with the description of each breed.

In order to make the score cards more useful a diagram is given in Figure 1, which names and locates the various parts referred to on the score cards.

AYRSHIRE

ORIGIN AND HISTORY

The Ayrshire breed originated in southwestern Scotland, in the county of Ayr, in the latter part of the eighteenth century. Doubtless cattle from several neighboring countries were used in the formation of the breed, though there is no record of direct foreign importations to the county of Ayr at that time. While this foreign blood probably had a good effect on the ultimate value of the breed, the substantial and efficient development of the breed seems to have come about mostly through subsequent judicious selection and mating.

IMPORTATION AND DISTRIBUTION

The first importations into the United States occurred in 1822. Since then Ayrshires have been imported almost every year, either from Scotland or Canada. As indicated by Tables 1 and 2, there were in 1920 about 30,000 registered Ayrshires in the United States and less than 400,000 grades carrying more or less Ayrshire blood. It is estimated that on January 1, 1929, there were about 42,000 registered Ayrshires in the United States.¹ Ayrshires are scattered through practically all the States, though by far the largest numbers are in the Northeastern States.

GENERAL CHARACTERISTICS

The Ayrshire has a well-built, stocky body, not heavily covered with flesh, but giving the appearance of great vigor and vitality. The calves weigh from 60 to 80 pounds at birth. The weight of mature bulls varies from 1,500 to 2,000 pounds, with an average of about 1,650 pounds, while mature cows range in weight from 850 to 1,250 pounds, and average about 1,050 pounds.

The color varies from almost pure white to nearly all cherry red or brown, with any combination of these colors. Usually the tail is white. The horns are large, and turn gracefully outward, then forward and back, giving a distinctive appearance to the head.

Ayrshire cows are noted for their symmetrical udders, which extend well forward and back, with no tendency to be pendent. The quarters are generally even, the teats medium in size and well placed.

¹ This figure was obtained by assuming that the relation between the number of animals registered 1914-1920 and the number of living animals in 1920 is the same as the relation between the number of animals registered 1922-1928 and the number of living animals in 1928.

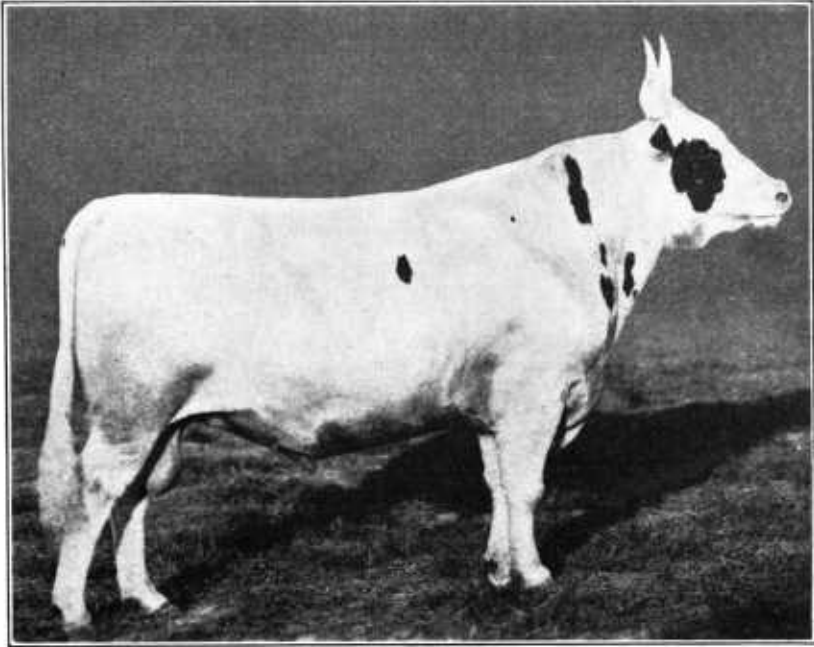


FIG. 2.—Ayrshire bull, Imp. Hobsland White King 23396. Grand champion, National Dairy Show, 1927

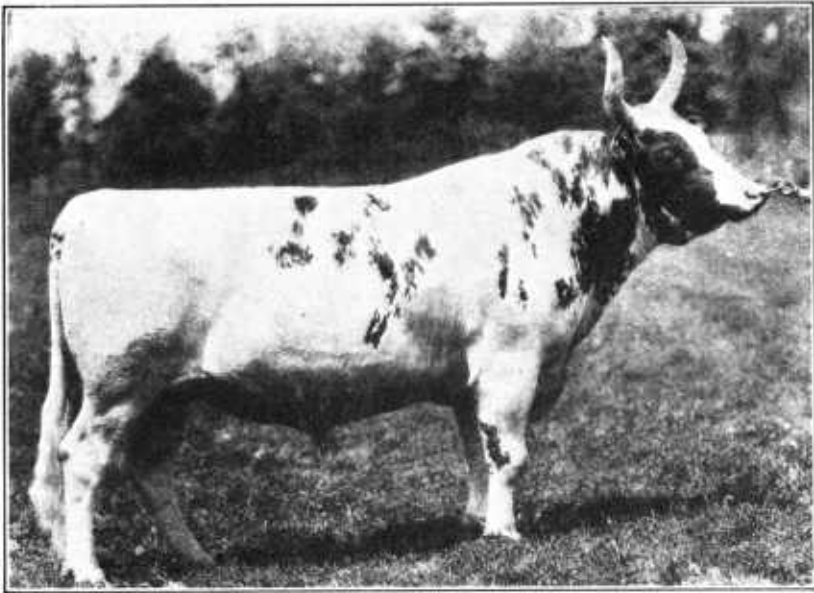


FIG. 3.—Ayrshire bull, Penhurst Rising Star 20922. Sixty-four of his daughters are in the Advanced Registry

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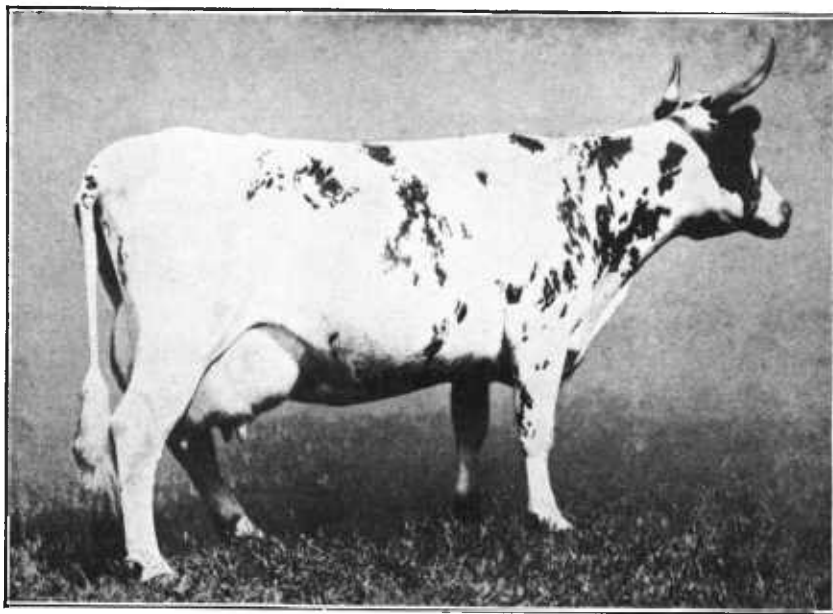


FIG. 4.—Ayrshire cow, Lily of Willowmoor 22269. Champion butterfat producer of the breed

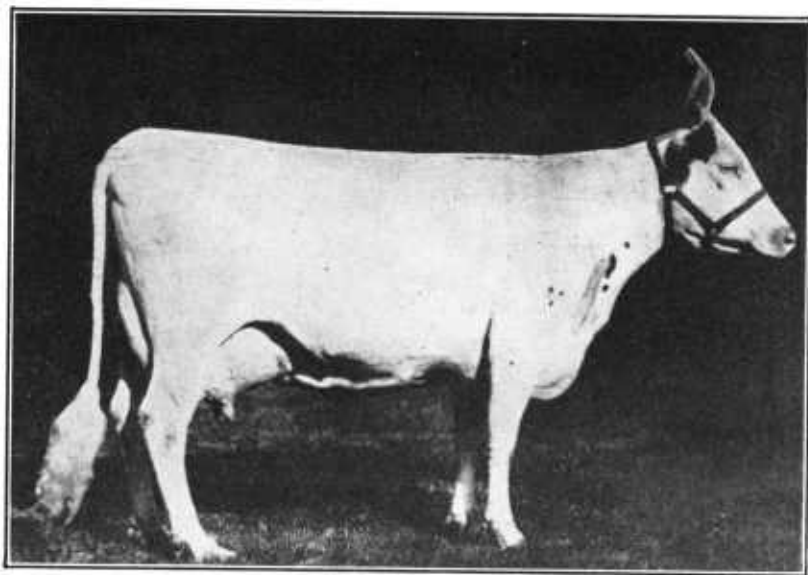


FIG. 5.—Ayrshire cow, Garclaugh May Mischief 27944. Champion milk producer of the breed

Scale of points for Ayrshire cow

| | |
|--|------------|
| Head | 10 |
| Forehead, broad and clearly defined..... | 1 |
| Horns, wide set on and inclining upward..... | 1 |
| Face, of medium length, slightly dished; clean cut, showing veins..... | 2 |
| Muzzle, broad and strong without coarseness, nostrils large..... | 1 |
| Jaws, wide at the base and strong..... | 1 |
| Eyes, full and bright with placid expression..... | 3 |
| Ears, of medium size and fine, carried alert..... | 1 |
| Neck, fine throughout, throat clean, neatly joined to head and shoulders, of good length, moderately thin, nearly free from loose skin, elegant in bearing..... | 3 |
| Fore quarters | 10 |
| Shoulders, light, good distance through from point to point but sharp at withers, smoothly blending into body..... | 2 |
| Chest, low, deep and full between back and forelegs..... | 6 |
| Brisket, light..... | 1 |
| Legs and feet, legs straight and short, well apart, shanks fine and smooth, joints firm, feet of medium size, round, solid, and deep..... | 1 |
| Body | 13 |
| Back, short and straight, chine lean, sharp and open jointed..... | 4 |
| Loin, broad, strong, and level..... | 2 |
| Ribs, long, broad, wide apart, and well sprung..... | 3 |
| Abdomen, capacious, deep, firmly held up with strong muscular development..... | 3 |
| Flank, thin and arching..... | 1 |
| Hind quarters | 11 |
| Rump, wide, level, long from hooks to pin bones, a reasonable pelvic arch allowed..... | 3 |
| Hooks, wide apart and not projecting above back nor unduly overlaid with fat..... | 2 |
| Pin bones, high, wide apart..... | 1 |
| Thighs, thin, long, and wide apart..... | 2 |
| Tail, fine, long, and set on level with back..... | 1 |
| Legs and feet, legs strong, short, straight when viewed from behind, and set well apart; shanks fine and smooth, joints firm, feet medium size, round, solid, and deep..... | 2 |
| Udder, long, wide, deep but not pendulous nor fleshy; firmly attached to the body, extending well up behind and far forward; quarters even; sole nearly level and not indented between teats, udder veins well developed and plainly visible..... | 22 |
| Teats, evenly placed, distance apart from side to side equal to half the breadth of udder, from back to front equal to one-third the length; length $2\frac{1}{2}$ to $3\frac{1}{2}$ inches, thickness in keeping with length, hanging perpendicularly and not tapering..... | 8 |
| Mammary veins, large, long, tortuous, branching, and entering large orifices..... | 5 |
| Escutcheon, distinctly defined, spreading over thighs, and extending well upward..... | 2 |
| Color, red of any shade, brown, or these with white; mahogany and white, or white, each color distinctly defined. (Brindle markings allowed but not desired)..... | 2 |
| Covering | 6 |
| Skin, medium thickness, mellow, and elastic..... | 3 |
| Hair, soft and fine..... | 2 |
| Secretions, oily, of rich brown or yellow color..... | 1 |
| Style, active, vigorous, showing strong character, temperament inclined to nervousness but still docile..... | 4 |
| Weight, at maturity, not less than 1,000 pounds..... | 4 |
| Total | 100 |

PRODUCTION

Ayrshire milk contains a percentage of butterfat that is about the average of all the dairy breeds. The 8,004 cows and heifers that completed official records up to January 1, 1929, produced an average

of 10,393 pounds of milk per cow, containing 415 pounds of butterfat, or 3.99 per cent butterfat.

Ten highest Ayrshire yearly butterfat and milk production records in the United States

| Butterfat production | | Milk production | |
|---------------------------------------|---------------|---|---------------|
| Cow | Butterfat | Cow | Milk |
| | <i>Pounds</i> | | <i>Pounds</i> |
| Lily of Willowmoor 22269..... | 955. 56 | Garclaugh May Mischief 27944..... | 25, 329 |
| Vi's Bountiful Lassie 58096..... | 923. 21 | Vi's Bountiful Lassie 58096..... | 24, 556 |
| Auchenbrain Brown Kate 4th 27943..... | 917. 60 | Mistress Thistle of South Farm 49818..... | 23, 029 |
| Garclaugh May Mischief 27944..... | 894. 91 | Auchenbrain Brown Kate 4th 27943..... | 23, 022 |
| Auchenbrain Yellow Kate 3d 36910..... | 888. 33 | Lily of Willowmoor 22269..... | 22, 596 |
| Agawam Bess Howie 43781..... | 876. 13 | Garclaugh Spottie 27950..... | 22, 589 |
| Harperland Spicy Lass 40652..... | 866. 21 | Nancy Whitehall 47810..... | 22, 074 |
| Jean Armour 3d 32219..... | 859. 65 | Jean Armour 3d 32219..... | 21, 938 |
| Nancy Whitehall 47810..... | 858. 77 | Bloomer's Queen 39119..... | 21, 820 |
| Bloomer's Queen 39119..... | 856. 41 | Willowmoor May Mischief 2d A 34173..... | 21, 161 |

BULLS

The 10 Ayrshire sires having the largest number of daughters with official yearly records, up to January 1, 1929, are listed below:

Ten Ayrshire sires having the largest number of Advanced-Registry daughters

| Sire | Number of daughters | Sire | Number of daughters |
|--|---------------------|--|---------------------|
| Penhurst Rising Star 20922..... | 64 | Netherton Statesman 16431..... | 53 |
| Kate's Champion of Penhurst 18782..... | 61 | Earl's Choice of Spring Hill 8289..... | 44 |
| Beuchan Peter Pan 12971 (imported)..... | 58 | Penhurst Man O'War 25200..... | 44 |
| Finlayston 8882 (imported)..... | 56 | Nox'emall 7312..... | 35 |
| Baron's Best of Bargoenoch 12858 (imported)..... | 53 | Hill Top Major Douglas 14969..... | 35 |

BROWN SWISS

ORIGIN AND HISTORY

The original home of the Brown Swiss breed is in Switzerland, where it has been developed during many centuries. It is probably one of the oldest breeds in existence, and it is thought that no outside blood has been introduced since records began.

IMPORTATION AND DISTRIBUTION

The first importation of Brown Swiss into the United States was made in Massachusetts in 1869 and another in 1882. A number of importations have been made since, but only in small numbers. After 1906 there were only a few importations because of regulations due to the prevalence of the foot-and-mouth disease in Europe. As shown in Tables 1 and 2, there were in 1920 in the United States about 8,000 registered animals and about 162,000 grades carrying more or less Brown Swiss blood. It is estimated that on January 1, 1929, there were about 28,000 registered Brown Swiss in the United

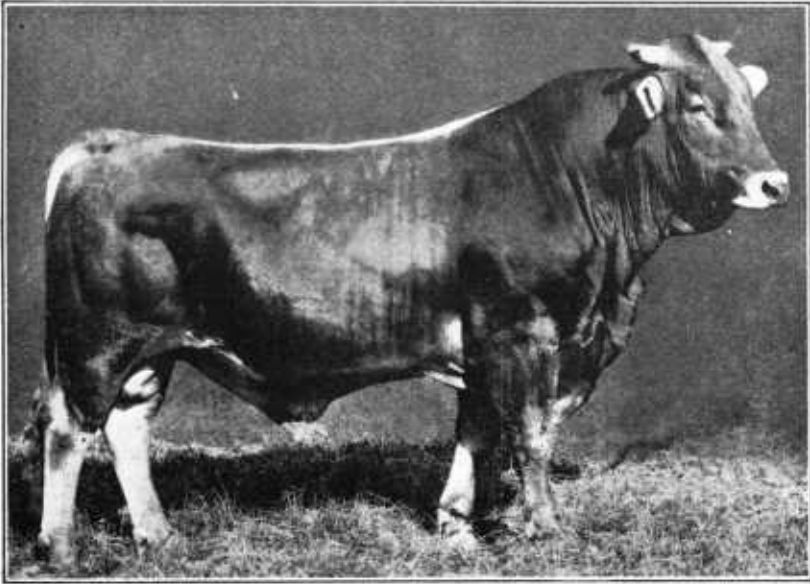


FIG. 6.—Brown Swiss bull, Reuben 2927. Twenty-four of his daughters are in the Advanced Registry



FIG. 7.—Brown Swiss bull, Maiden's Vronicka's College Boy 11393. Grand Champion, National Dairy Show, 1927

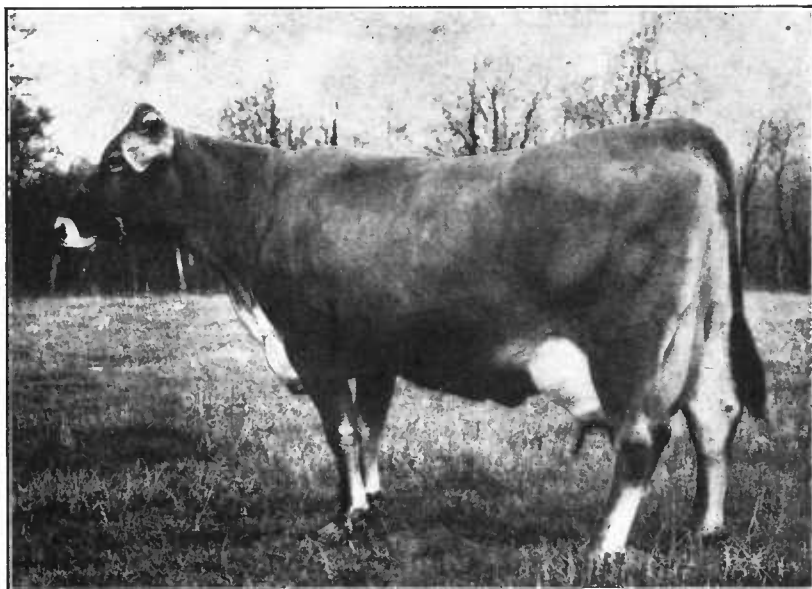


FIG. 8.—Brown Swiss cow, Swiss Valley Girl 10th 7887. Champion milk and butterfat producer of the breed

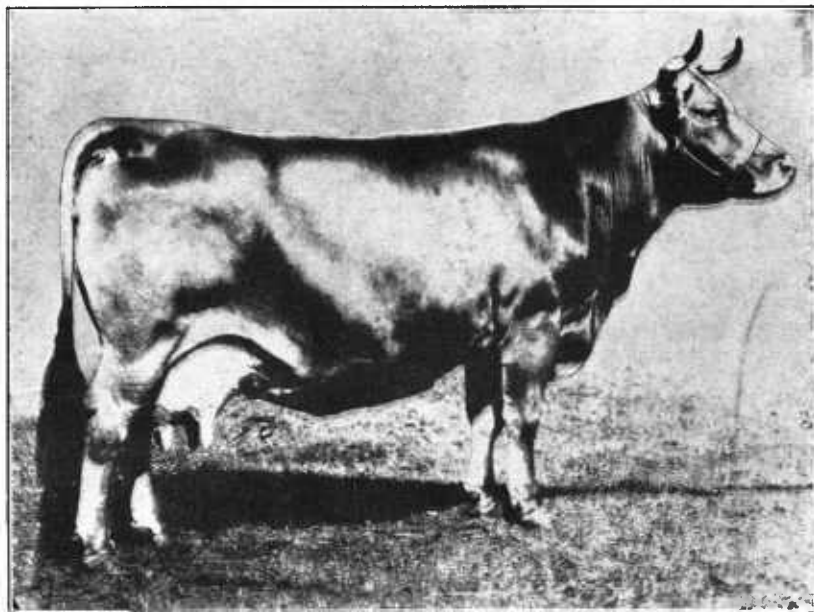


FIG. 9.—Brown Swiss cow, Silver Belle 9322. Grand champion, National Dairy Show, 1928

States.² Brown Swiss are scattered in 37 States, the largest numbers being in Wisconsin, Illinois, New York, Minnesota, Michigan, Iowa, Pennsylvania, and Ohio. Of late years the breed has made notable increase in popularity.

GENERAL CHARACTERISTICS

The large frame of the Brown Swiss cattle indicates that they have been developed for service as draft animals as well as for milk. They are substantial in appearance, well proportioned, with the body well covered with flesh. The calves weigh from 65 to 90 pounds at birth. The heifers are slow in maturing. When full grown the cows weigh from 1,100 to 1,500 pounds, averaging about 1,250 pounds; and the bulls range in weight from 1,500 to 2,200 pounds, averaging about 1,750 pounds.

The color of the Brown Swiss varies from dark to light brown, and at some seasons of the year approaches gray. There is usually a light stripe of gray along the back. White splashes near the udder are found on some animals, but white splashes on the sides of the body or on the back are objectionable. The hair between the horns is usually a lighter shade than the body. The nose, switch, tongue, and horn tips are always black, and there is usually a light or mealy ring around the muzzle.

Scale of points for Brown Swiss cow or heifer

| | |
|---|------------|
| Head, medium size and rather long..... | 2 |
| Face, dished, narrow between horns and wide between eyes..... | 2 |
| Ears, large, fringed inside with light-colored hair, skin inside of ear a deep orange color..... | 2 |
| Nose, black, large, and square, with mouth surrounded by mealy colored band, tongue black..... | 2 |
| Eyes, moderately large, full, and bright..... | 2 |
| Horns, short, regularly set with black tips..... | 2 |
| Neck, straight, throat clean, neatly joined to head, shoulders of good length, moderately thin at the withers..... | 4 |
| Chest, low, deep, and full between and back of forelegs..... | 6 |
| Back, level to setting of tail and broad across the loin..... | 6 |
| Ribs, long and broad, wide apart and well sprung, with thin, arching flanks.. | 3 |
| Abdomen, large and deep..... | 5 |
| Hips, wide apart, rump long and broad..... | 4 |
| Thighs, wide, quarters not thin..... | 4 |
| Legs, short and straight, with good hoofs..... | 2 |
| Tail, slender, well set on, with good switch..... | 2 |
| Hide of medium thickness, mellow and elastic..... | 3 |
| Color—shades from dark to light brown, at some seasons of the year gray; white splashes near udder not objectionable, light stripe along back. White splashes on body or sides objectionable. Hair between horns usually lighter shade than body..... | 4 |
| Fore udder, wide, deep, well rounded but not pendulous nor fleshy, extending far forward on the abdomen..... | 12 |
| Rear udder, wide, deep, but not pendulous nor fleshy, extending well up behind..... | 12 |
| Teats, rather large, set well apart and hanging straight..... | 8 |
| Milk veins large, long, tortuous, elastic, and entering good wells..... | 6 |
| Disposition, quiet..... | 2 |
| Size, evidence of constitution, and stamina..... | 5 |
| Total..... | 100 |

² See footnote 1, p. 6.

PRODUCTION

The Brown Swiss produces milk of average quality compared with the other breeds of dairy cattle. The 530 cows and heifers that completed yearly records and were admitted to the Register of Production up to January 1, 1929, have an average yearly production of 12,813 pounds of milk and 512.7 pounds of butterfat per cow, with an average butterfat test of 4 per cent. The 10 highest butterfat and milk producers among the Brown Swiss are listed below.

Ten highest Brown Swiss yearly butterfat and milk production records in the United States

| Butterfat production | | Milk production | |
|-------------------------------------|---------------|---------------------------------------|---------------|
| Cow | Butterfat | Cow | Milk |
| | <i>Pounds</i> | | <i>Pounds</i> |
| Swiss Valley Girl 10th 7887..... | 1, 106. 33 | Swiss Valley Girl 10th 7887..... | 27, 514 |
| June's College Girl 11427..... | 1, 062. 30 | Believe 4245..... | 25, 848 |
| Swiss Girl F. C. 13853..... | 1, 003. 76 | Alice Lee 2d 8777..... | 24, 845 |
| Believe 4245..... | 1, 002. 62 | June's College Girl 11427..... | 24, 572 |
| Hawthorn Dairy Maid 6753..... | 927. 23 | Swiss Girl F. C. 13853..... | 23, 236 |
| Alice Lee 2d 8777..... | 914. 38 | Olympe of Walhalla 10309..... | 23, 023 |
| Nancy V. 2d 12104..... | 885. 80 | Clothilda Werder's Aggie 10691..... | 22, 809 |
| Clothilda Werder's Aggie 10691..... | 880. 22 | Hawthorn Dairy Maid 6753..... | 22, 765 |
| Goldie Merrillean 12103..... | 873. 51 | Sterling Pride of Lake View 9530..... | 22, 597 |
| Darling D. 8845..... | 860. 52 | Lucile of Lake View 10739..... | 22, 096 |

BULLS

The 10 Brown Swiss sires having the largest number of daughters with official yearly records, up to January 1, 1929, are listed below.

Ten Brown Swiss sires having the largest number of daughters in Register of Production

| Sire | Number of daughters | Sire | Number of daughters |
|-------------------------------|---------------------|------------------------------|---------------------|
| Reuben 2927..... | 24 | Junker 2365..... | 10 |
| College Master 2986..... | 12 | Coniston 7404..... | 10 |
| Vogel's College Boy 5638..... | 12 | Collier 2075..... | 9 |
| Swiss Valley Reuben 6074..... | 11 | Tom Phylis 1769..... | 9 |
| Sunny Hill Bob 6170..... | 11 | Ilda's College Boy 6663..... | 8 |

DUTCH BELTED

ORIGIN AND HISTORY

The Dutch Belted breed originated in Holland about two centuries ago. The breed gets its name both from the original home and from the distinctive color marking. This breed has probably been developed from the same cattle as the Holstein-Friesian. The early records show that the Dutch Belted were bred by the nobility of Holland, and while the unusual color marking was perhaps the chief basis of selection, the qualities of milk production and dairy refinement were not lost sight of.

IMPORTATION AND DISTRIBUTION

The first importation of Dutch Belted cattle into the United States was made probably in 1838. The first importation of importance, however, was made in 1840 by P. T. Barnum for show purposes. These cattle later were placed on a farm, and this seems to be the beginning of the Dutch Belted cattle in America. A number were imported from that time on until 1885, and some in 1906 and 1907. Since then no importations have been made on account of the prevalence of foot-and-mouth disease in Europe. It is estimated by the Dutch Belted Association of America that on January 1, 1929, there were 1,800 registered animals of this breed in the United States.

GENERAL CHARACTERISTICS

Dutch Belted cattle have the general dairy conformation, which includes fineness of bone and freedom from beefiness. The aim of the breeders of these cattle is to breed animals that have no white other than that of the standard belt around the body. This belt begins back of the shoulder and may extend to the front of the hips but must not be narrower than 6 inches at the narrowest point. There must be no black spots in the belt on females. The width of the belt on each animal tends to be uniform around the body. The remainder of the animal is coal black except that females may have not to exceed 3 inches of white on hind feet above the hoof, and males may have not to exceed 2½ inches of white on one hind foot above the hoof.

Calves at birth range in weight from 60 to 90 pounds. Well-developed mature cows weigh from 1,000 to 1,500 pounds, averaging about 1,200 pounds; and bulls from 1,500 to 2,000 pounds, averaging about 1,700 pounds.

Scale of points for Dutch Belted cow

| | |
|--|-----|
| Body color, black, with a clearly defined continuous white belt. The belt to be of medium width, beginning behind the shoulder and extending nearly to the hips..... | 8 |
| Head, comparatively long and somewhat dishing; broad between the eyes. Poll, prominent; muzzle, fine; dark tongue..... | 6 |
| Eyes, black, full and mild. Horns long compared with their diameter..... | 4 |
| Neck, fine and moderately thin and should harmonize in symmetry with the head and shoulders..... | 6 |
| Shoulders fine at top, becoming deep and broad as they extend backward and downward, with a low chest..... | 4 |
| Barrel large and deep with well-developed abdomen; ribs well rounded and free from fat..... | 10 |
| Hips broad, and chine level, with full loin..... | 10 |
| Rump high, long, and broad..... | 6 |
| Hind quarters long and deep, rear line incurving; tail long, slim, tapering to a full switch..... | 8 |
| Legs short, clean, standing well apart..... | 3 |
| Udder large, well-developed front and rear; teats of convenient size and apart; mammary veins large, long, and crooked, entering large orifices..... | 20 |
| Escutcheon..... | 2 |
| Hair fine and soft; skin of moderate thickness of a rich, dark, or yellow color..... | 3 |
| Quiet disposition and free from excessive fat..... | 4 |
| General condition and apparent constitution..... | 6 |
| Perfection..... | 100 |

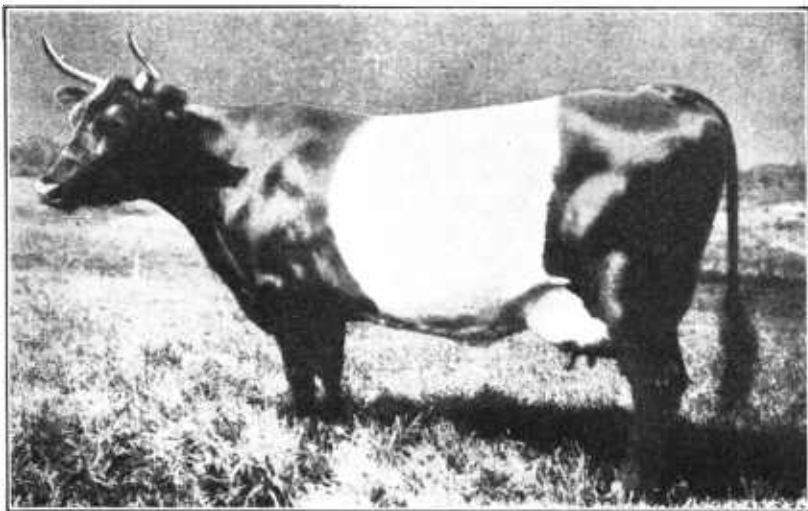


FIG. 10.—Dutch Belted cow, Gloria 3231. Leading butterfat producer of the breed

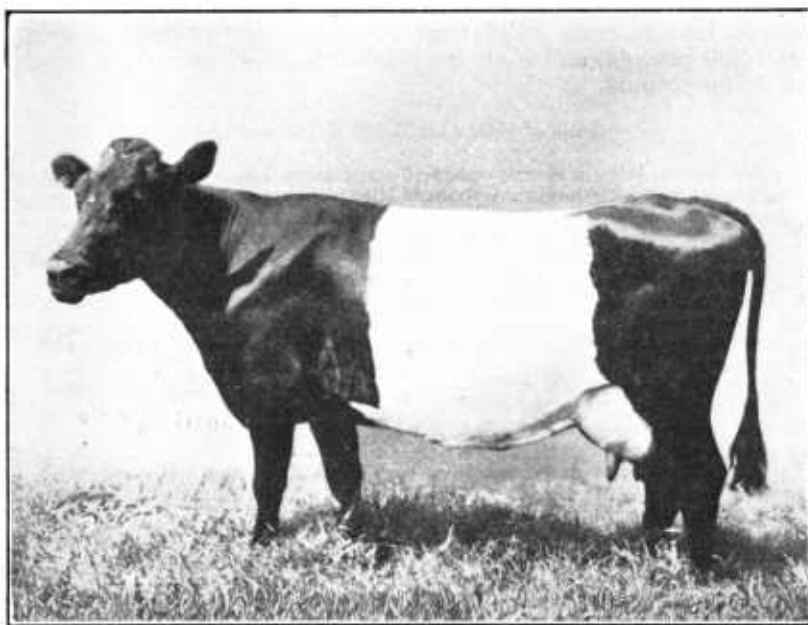


FIG. 11.—Dutch Belted cow, Gem of Columbia 2038. Leading milk producer of the breed

PRODUCTION

By referring to Table 3 it will be seen that in the percentage of butterfat contained in her milk the Dutch Belted cow falls between the Holstein and the Ayrshire. The Dutch Belted cows and heifers that finished yearly official records up to January 1, 1929, show an average production of 10,035 pounds of milk and 384.3 pounds of butterfat, with an average test of 3.83 per cent.

The 10 highest producers of butterfat and milk among Dutch Belted cows are listed below.

Ten highest Dutch Belted yearly butterfat and milk production records in the United States

| Butterfat production | | Milk production | |
|---------------------------------|---------------|---------------------------------------|---------------|
| Cow | Butterfat | Cow | Milk |
| | <i>Pounds</i> | | <i>Pounds</i> |
| Gloria 3231..... | 780.08 | Gem of Columbia 2038..... | 17,268 |
| Angelina 2641..... | 668.07 | Gloria 3231..... | 16,546 |
| Gem of Columbia 2039..... | 633.86 | Angelina 2641..... | 16,023 |
| Glenbeulah's Beauty 2172..... | 531.19 | Fern dell 1961..... | 13,478 |
| Orange Lilly 3126..... | 518.81 | Glenbeulah's Beauty 2172..... | 13,296 |
| Priscilla of Lakeview 2937..... | 517.52 | Priscilla of Lakeview 2937..... | 13,257 |
| Lenetta 2834..... | 506.20 | Peapack Anna 1487..... | 13,159 |
| Fern dell 1964..... | 501.10 | Peapack Dutchess 1390 (imported)..... | 13,065 |
| Nancy Lee's Flower 3201..... | 493.80 | Florida Lee 2654..... | 12,064 |
| Peapack Anna 1487..... | 487.31 | Orange Lilly 3126..... | 11,970 |

BULLS

The 10 Dutch Belted sires having up to January 1, 1929, three or more daughters with Advanced-Register official yearly records are Keith 934, Samoset 1134, Michigan's Prince 1258, Defendant 1185, Sutton's Gay Lad 494, Salvador 2d 1448, Glenbeulah's Duke 1092, Bruce W. 729, Monarch of Lakeview 1219, Wonder of Lakeview 1483.

GUERNSEY

ORIGIN AND HISTORY

The Guernsey breed originated in the Channel Islands, near the north coast of France. It is thought that this breed has been developed from a cross between the large red and brindle cattle of Normandy and the small red cattle of Brittany, in France. The exact date of origin is unknown, but it was probably in the latter part of the seventeenth century or before.

All the cattle in the Channel Islands were at one time known as Alderneys. After laws had been enacted forbidding the importation of cattle from the Continent or between the islands of Guernsey and Jersey, two distinct breeds came to be recognized. The one on the islands of Alderney, Sark, and Guernsey became known as the Guernsey breed and the one on Jersey Island as the Jersey breed.

IMPORTATION AND DISTRIBUTION

The first cattle from the Channel Islands brought to America were called Alderneys. They were imported in the latter part of the

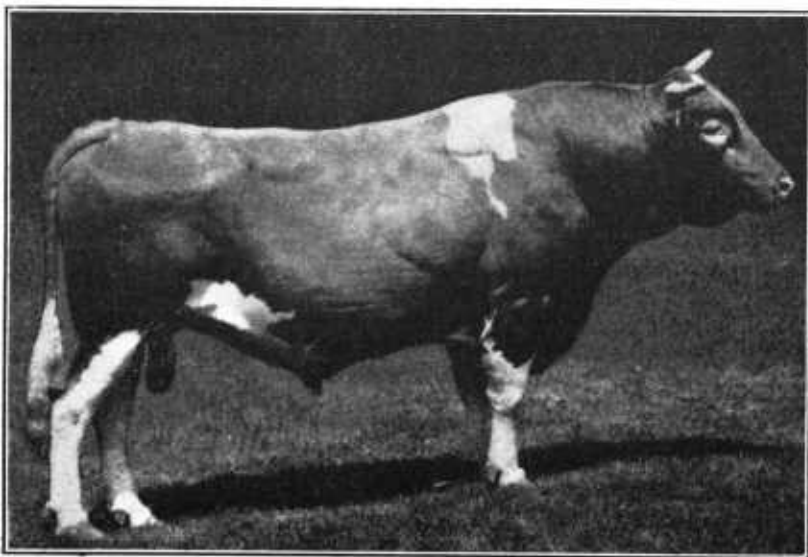


FIG. 12.—Guernsey bull, Yeoman's King of the May 17053. He has 109 daughters in the Advanced Registry

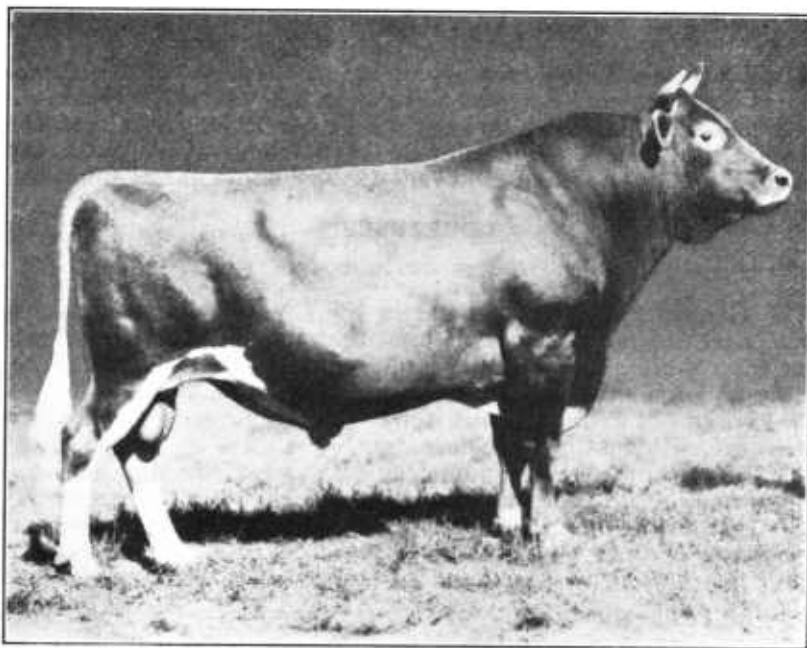


FIG. 13.—Guernsey bull, Border King of Roberts 71645. Grand Champiou, National Dairy Show, 1927

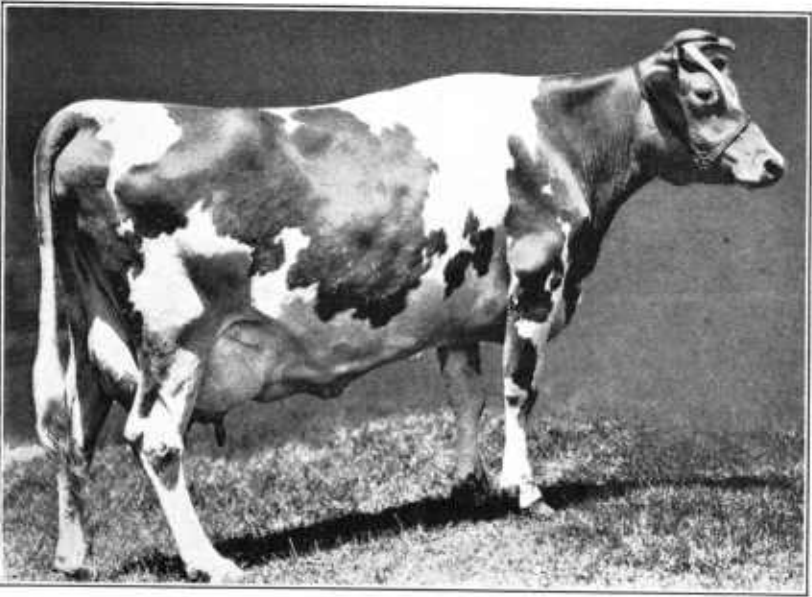


FIG. 14.—Guernsey cow, Anesthesia Faith of Hill Stead 114354. Champion butterfat producer of the breed

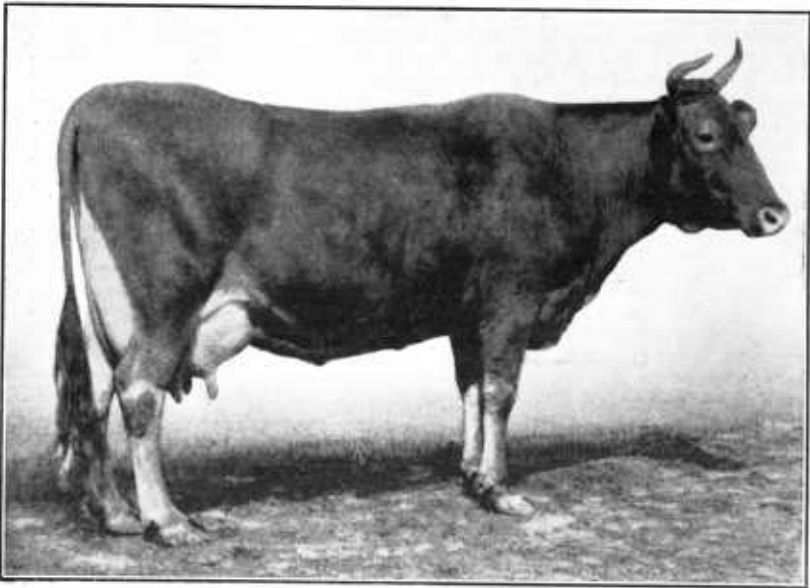


FIG. 15.—Guernsey cow, Murne Cowan 19597. Champion milk producer of the breed

eighteenth century and may have been either Guernsey or Jersey cattle. The first animals recorded in the herdbook of the American Guernsey Cattle Club were brought over in 1830. A few more were imported in the next two decades, but not until about 1870 were extensive importations made. Since that time importations have been made nearly every year.

According to Tables 1 and 2, there were in 1920 about 80,000 registered Guernsey cattle in the United States and about 1,900,000 grades. It is estimated that on January 1, 1929, there were about 165,000 registered Guernseys in the United States.³

GENERAL CHARACTERISTICS

In size the Guernseys are about equal to the Ayrshires and slightly smaller than the Brown Swiss. The calves weigh from 55 to 85 pounds at birth, and reach maturity early. When mature the cows weigh from 800 to 1,400 pounds, averaging about 1,050; and the bulls from 1,200 to 2,200 pounds, averaging about 1,600 pounds.

The color of the Guernseys is fawn and white, with fawn predominating. A light cherry red with white is also found. Sometimes white may be entirely lacking except on the legs. The switch is usually white and the tongue light in color. The horns are of moderate size and amber in color. The skin is yellow.

Scale of points for Guernsey cow

| | |
|---|----|
| Style and symmetry, attractive individuality revealing vigor, femininity and breed character; a harmonious blending and correlation of parts; an active well-balanced walk..... | 5 |
| Head, moderately long, clean-cut, showing femininity and breed character; a lean face; wide mouth and broad muzzle with open nostrils; strong jaws; full bright eyes with gentle expression; forehead broad between the eyes and moderately dishing; bridge of nose straight..... | 5 |
| Horns, yellow, small at base; of medium length; inclining forward; not too spreading..... | 1 |
| Neck, long and thin; clean throat, smoothly blending into shoulders..... | 2 |
| Withers, chine rising above shoulder blades, with open vertebrae..... | 2 |
| Shoulders, shoulder blades set smoothly against chine and chest wall, forming neat junction with the body..... | 2 |
| Chest, wide, and deep at heart with least possible depression back of the shoulders..... | 4 |
| Back, appearing straight from withers to hips..... | 5 |
| Loin, strong, broad, and nearly level laterally; width carried forward to junction with the ribs..... | 3 |
| Hips, wide apart, approximately level with the back; free from excess tissue..... | 2 |
| Rump, long, continuing with level of the back; approximately level between hip bone and pin bones. Pin bones well apart..... | 4 |
| Thurls, wide apart and high..... | 2 |
| Barrel, deep and long, with well-sprung ribs. Individual ribs, long, flat, wide apart, and free from excess tissue..... | 10 |
| Thighs, incurving when viewed from side, thin and wide apart when viewed from rear; well cut up between thighs..... | 2 |
| Legs, flat flinty bone, tendons clearly defined; front legs straight; hind legs nearly upright from hock to pastern, set wide apart and nearly straight when viewed from behind. Pastern, strong and springy..... | 2 |
| Hide, loose and pliable, and not thick, with oily feelings; hair, fine and silky..... | 3 |
| Tail, long, tapering with neat, strong, level attachment, neatly set between pin bones; fine bone and hair; nicely balanced switch..... | 2 |

³ See footnote 1, p. 6.

| | |
|--|------------|
| Udder, uniformly fine in texture; free from meatiness; covered with pliable velvety skin..... | 3 |
| Veins prominent..... | 1 |
| Attachment to body: Strong, long, and wide..... | 4 |
| Extending well forward; extending well up behind..... | 4 |
| Sole: Level between teats..... | 2 |
| Teats: Of even convenient size; cylindrical in shape; well apart and squarely placed, plumb..... | 3 |
| Mammary veins long, tortuous, prominent, and branching, with large numerous wells..... | 3 |
| Secretions indicating color of product, indicated by the pigment secretion of skin which should be a deep yellow inclining toward orange in color; especially discernible in the ear, at the end of bone of tail, around the eyes and nose, on the udder and teats, and at the base of horns; hoofs and horns amber colored..... | 20 |
| Color markings, a shade of fawn with white markings..... | 2 |
| Size, mature cows, about 1,100 pounds in milking condition..... | 2 |
| Total..... | 100 |

PRODUCTION

Guernsey milk has a high per cent of butterfat and a yellow color.

The 27,210 cows and heifers that completed official records up to January 1, 1929, produced an average per cow of 9,775 pounds of milk and 488.1 pounds of butterfat, the average test being 4.99 per cent.

The 10 highest butterfat and milk producers among the Guernseys are listed below.

Ten highest Guernsey yearly butterfat and milk production records in the United States

| Butterfat production | | Milk production | |
|--|---------------|--|---------------|
| Cow | Butterfat | Cow | Milk |
| | <i>Pounds</i> | | <i>Pounds</i> |
| Anesthesia Faith of Hill Stead 114354..... | 1, 112. 50 | Murne Cowan 19597..... | 24, 008 |
| Countess Frue 43785..... | 1, 103. 30 | Fet of La Grange 2d 48429..... | 21, 968 |
| Murne Cowan 19597..... | 1, 098. 20 | Peterkin's Beauty of Fairview S. 112241..... | 21, 111 |
| May Rilmia 22761..... | 1, 073. 41 | Katherine's Trixie 100396..... | 21, 071 |
| Gertrude Claire 99550..... | 1, 020. 00 | Gertrude Claire 99550..... | 20, 738 |
| Nella Jay 4th 38233..... | 1, 019. 30 | Nella Jay 4th 38233..... | 20, 710 |
| Langwater Nancy 27943..... | 1, 011. 70 | Molly's Lassie 86472..... | 20, 592 |
| Dairy Maid Queen of Spring Hill 74067..... | 1, 011. 20 | St. Austell Daffodil 84890..... | 20, 491 |
| Langwater Hope 27946..... | 1, 003. 20 | Miss Daisy of Maple Hill 72610..... | 20, 315 |
| Lillia of Iowa 2d 61500..... | 998. 40 | Tom's Daisy 54541..... | 20, 298 |

BULLS

The 10 Guernsey sires having the largest number of daughters with official yearly records, up to January 1, 1929, are listed below.

Ten Guernsey sires having the largest number of Advanced-Register daughters

| Sire | Number of daughters | Sire | Number of daughters |
|---|---------------------|---------------------------------------|---------------------|
| Governor of the Chêne (R. G. A. S. 1297 P. S.)..... | 114 | Florham Laddie 20431..... | 58 |
| Yeoman's King of the May 17053..... | 109 | Galaxy's Sequel 16904 (imported)..... | 53 |
| Langwater Demonstrator 16451..... | 76 | Langwater Foremost 39191, A. R..... | 50 |
| Masher's Sequel 11462 (imported)..... | 70 | Ne Plus Ultra 15265..... | 48 |
| Clara's Sequel 29414 (imported)..... | 65 | Beda's May King 11893..... | 47 |

HOLSTEIN-FRIESIAN

ORIGIN AND HISTORY

The cattle from which our present Holstein-Friesian breed has descended were developed in northern Holland, especially in the Province of Friesland, and in the neighboring Provinces of northern Germany. The time of their origin as a recognized distinct breed is unknown, but it is probable that they have been selected for their dairy qualities for about 2,000 years.

Before 1885 there were two associations furthering the interests of this breed in the United States. One maintained a Holstein herdbook, and the other a Dutch-Friesian herdbook. In 1885 the two associations were combined into the Holstein-Friesian Association of America, and from that time on only one herd register has been maintained. This is known as the Holstein-Friesian herdbook. While the official name of the breed is Holstein-Friesian, the single word "Holstein" is more common in ordinary use.

IMPORTATION AND DISTRIBUTION

The first importations of Holsteins into the United States were made in 1795, and afterwards a few were brought in from time to time up to 1879, following which heavy importations were made each year until 1887. Thereafter only a few were imported up to 1905, and since then, because of the prevalence of foot-and-mouth disease in Europe, very few have been imported.

According to Tables 1 and 2 there were in 1920 about 528,000 registered Holsteins in the United States and about 10,500,000 grades. It is estimated that on January 1, 1929, there were about 754,000 registered Holsteins in the United States.⁴ Holstein cattle are found throughout all the 48 States though by far the largest number are in New York, Wisconsin, Pennsylvania, Ohio, Michigan, and Illinois, in the order named. These six States contain more than 60 per cent of the registered Holstein cattle in the United States.

GENERAL CHARACTERISTICS

The Holsteins are the largest of the dairy breeds. They have large frames, not heavily covered with flesh. The calves weigh from 70 to 105 pounds at birth. The mature bulls weigh from 1,600 to 2,200, and average about 1,900 pounds; and the mature cows weigh from 1,100 to 1,750, and average about 1,250 pounds. The color is black and white, with the colors sharply defined rather than blended. They may be nearly all white or black, but no solid-color animal can be registered.

Scale of points for Holstein-Friesian cow

| | |
|--|---|
| Forehead, broad between the eyes; dishing..... | 2 |
| Face, of medium length; clean cut; feminine; the bridge of the nose straight..... | 1 |
| Muzzle, broad, with strong lips; nostrils, large and open; jaws strong..... | 3 |
| Ears of medium size; of fine texture; well carried..... | 1 |
| Eyes, large; full; mild; bright..... | 2 |
| Horns, small; tapering finely toward the tips; set moderately narrow at base; inclining forward; well curved inward..... | 1 |
| Neck, long; fine and clean at junction with the head; evenly and smoothly joined to shoulder..... | 3 |

⁴ See footnote 1, p. 6.

| | |
|---|-----|
| Shoulders, slightly lower than the hips; smooth and rounding over tops; moderately broad and full at sides..... | 3 |
| Crops, full; level with the shoulders..... | 5 |
| Chine, straight; strong; broadly developed, with open vertebræ..... | 4 |
| Loin and hips, broad; level or nearly level between the hip bones; level and strong laterally; spreading from chine broadly and nearly level; hip bones fairly prominent..... | 6 |
| Rump, long; broad with roomy pelvis; nearly level laterally; full above the thurls; carried out straight to tail head..... | 6 |
| Pin bones, wide between; nearly level with hips..... | 2 |
| Thurls, high; broad through..... | 2 |
| Tail head and tail, strong at base without coarseness; the setting well back; tail long, tapering finely to a full switch..... | 2 |
| Chest, deep; wide; well filled and smooth in the brisket; broad between the forearms; full in the foreflanks..... | 6 |
| Barrel, long; deep; well rounded; strongly and trimly held up..... | 9 |
| Flanks, deep; full..... | 2 |
| Thighs, wide; deep; straight behind; wide and moderately full at the out-sides; twist well cut out and filled with development of udder; escutcheon well defined..... | 2 |
| Mammary veins, large, tortuous, entering large orifices or double extension; with additional developments, such as branches and connections entering numerous orifices..... | 8 |
| Udder, capacious; flexible; quarters even and of uniform texture, filling the space in the rear below the twist, extending well forward; broad and well attached..... | 14 |
| Teats, well formed; plumb; of convenient size; properly placed..... | 4 |
| Legs, medium length; clean; nearly straight; wide apart; firmly and squarely set under the body; arms wide, strong, and tapering..... | 4 |
| Hair and hide, hair healthy in appearance; fine and soft; hide of medium thickness; mellow and loose..... | 8 |
| Total..... | 100 |

PRODUCTION

The Holsteins produce a larger quantity of milk, with a lower butterfat content, than any other dairy breed. The milk is not so highly colored as that from the Guernseys and Jerseys.

The 31,392 official records of Holstein cows and heifers that were completed up to January 1, 1929, show an average yearly production of 16,070 pounds of milk and 544.49 pounds of butterfat, the average being 3.38 per cent.

The 10 highest butterfat and milk producers among the Holsteins are listed below.

Ten highest Holstein yearly butterfat and milk production records in the United States

| Butterfat production | | Milk production | |
|--|-----------|---|--------|
| Cow | Butterfat | Cow | Milk |
| | Pounds | | Pounds |
| Daisy Aggie Ormsby 3d 571569..... | 1,286.23 | Segis Pietertje Prospect 221846..... | 37,381 |
| May Walker Ollie Homestead 300043..... | 1,218.59 | Helm Veeman Woodcrest 486877..... | 36,218 |
| Hollywood Liliith Palmyra Abbecker 400491..... | 1,206.79 | Kolrain Marion Finderne 317396..... | 35,340 |
| Duchess Skylark Ormsby 124514..... | 1,205.09 | Kolrain Finderne Bess 291570..... | 35,085 |
| Carnation Walker Hazelwood 834565..... | 1,198.85 | Kathleen Triumph 1032712..... | 34,972 |
| Bess Johanna Ormsby 263431..... | 1,198.09 | Nooksack Lunde Oregon De Kol 301119..... | 34,511 |
| Redfield Segis Johanna 735950..... | 1,182.93 | Queen Carlotta De Kol 311674..... | 34,430 |
| Finderne Pride Johanna Rue 121083..... | 1,176.47 | Adirondac Wietske Dairy Maid 204072..... | 34,402 |
| Queen Bessie Pietertje Ormsby 648084..... | 1,172.75 | Grahamholm Colantha Pauline Segis 405465..... | 34,292 |
| Segis Pietertje Prospect 221846..... | 1,158.95 | Princess Aggie Polkadot De Kol 372024..... | 34,071 |

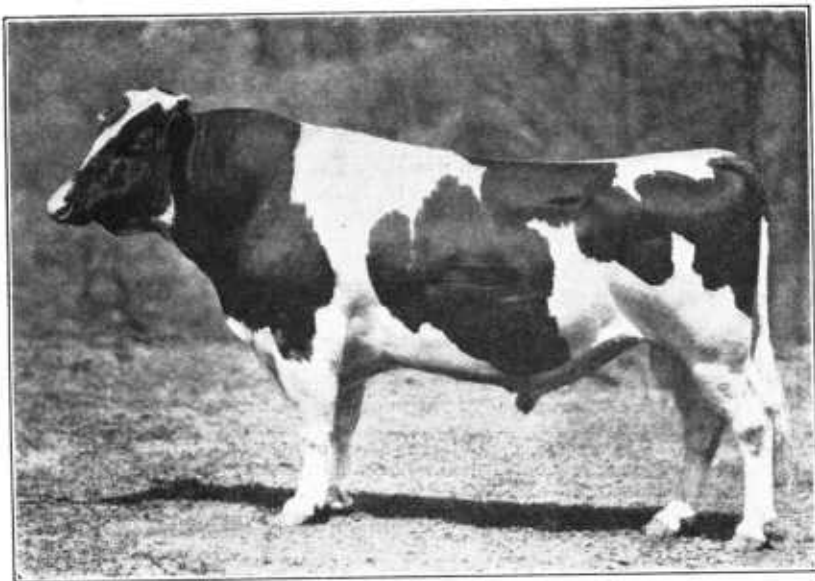


FIG. 16.—Holstein bull, King of the Ormsbys 178078. He has 105 yearly-record daughters in the Advanced Register

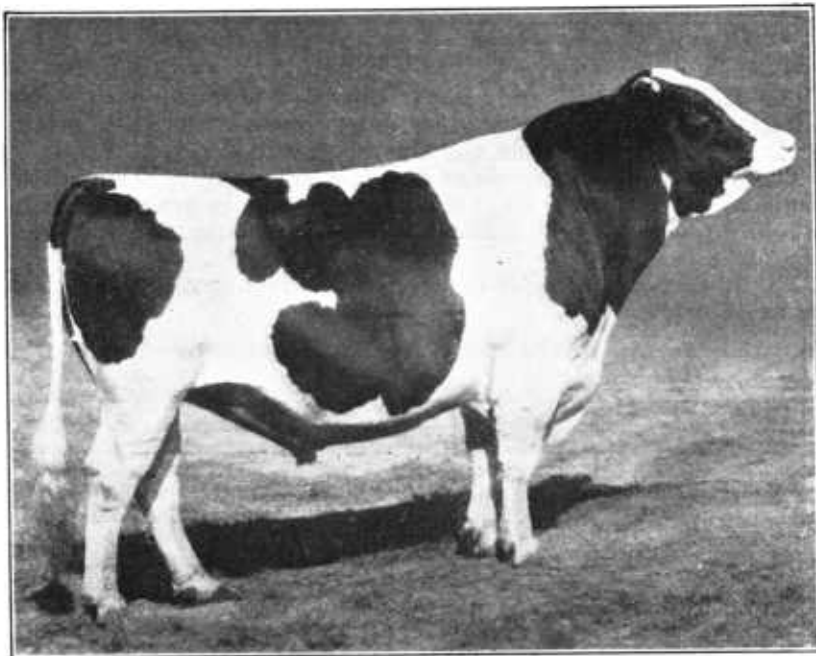


FIG. 17.—Holstein bull, Sir Fobes Ormsby Hengerveld 412147. Grand champion, National Dairy Show, 1927

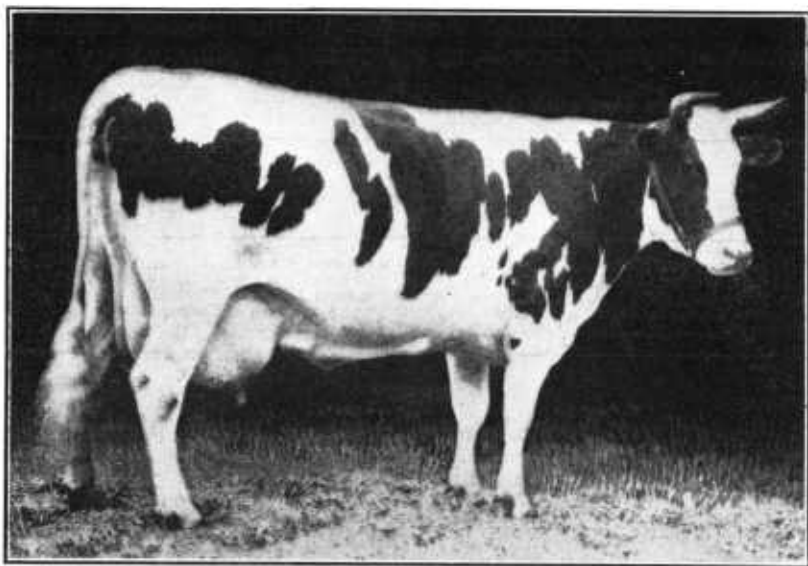


FIG. 18.—Holstein cow, Segis Pictertje Prospect 221846. Has highest yearly milk record of all the breeds

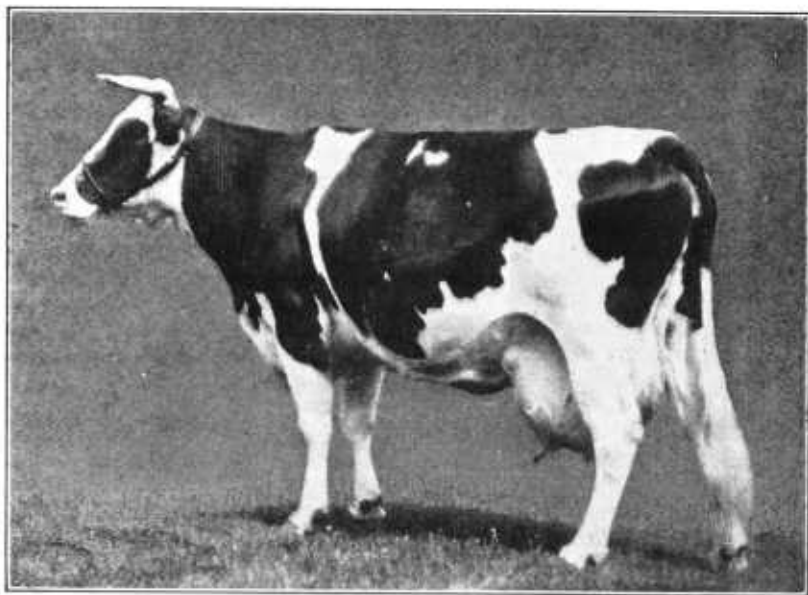


FIG. 19.—Daisy Aaggie Ormsby 3d 571569. Has highest yearly butterfat record of all the breeds in the United States

BULLS

The 10 Holstein-Friesian sires having the largest number of daughters with yearly records, up to January 1, 1929, are listed below.

Ten Holstein sires with the largest number of yearly-record daughters

| Sire | Number of daughters | Sire | Number of daughters |
|----------------------------------|---------------------|--|---------------------|
| King of the Ormsbys 178078..... | 105 | Sir Johanna Fayne 42147..... | 73 |
| Matador Segis Walker 148839..... | 91 | Dutchland Colantha Sir Inka 50999..... | 72 |
| Sir Inka Prilly Segis 80914..... | 80 | King Segis Alcartra Prilly 192705..... | 71 |
| King Pontiac Champion 53418..... | 75 | Colantha Sir Walker Korndyke 95460..... | 70 |
| Judge Segis 80912..... | 74 | Sir Pietertje Ormsby Mercedes 44931..... | 70 |

JERSEY

ORIGIN AND HISTORY

The Jersey breed originated in the Island of Jersey, one of the group of Channel Islands, between England and France. In 1789 a law was passed prohibiting the importation of cattle into Jersey Island except for immediate slaughter. Shortly afterwards the cattle on that island became known by the name of Jersey instead of Alderney. No outside blood has been introduced since that time.

IMPORTATION AND DISTRIBUTION

The first importation of Jerseys into the United States was made in 1850. A few more were brought over about 20 years later, and from 1870 to 1890 there were numerous importations. Since 1890 many Jerseys have been imported every year.

The Jerseys are more evenly distributed in the United States than any other breed. There were about 232,000 registered and about 9,300,000 grade Jerseys in this country in 1920, well scattered throughout all the 48 States. It is estimated that on January 1, 1929, there were about 342,000 registered Jerseys in the United States.⁵

GENERAL CHARACTERISTICS

The Jersey is the smallest of the breeds discussed in this bulletin. The calves weigh from 40 to 75 pounds at birth. The heifers develop rapidly and mature sufficiently to drop the first calf at 24 months of age. The mature cows weigh from 700 to 1,200 pounds, averaging about 900 pounds, and the bulls weigh from 1,200 to 1,800, averaging about 1,500 pounds.

The color of Jerseys is usually some shade of fawn or cream color, though different shades of mouse color, gray, and brown are common and some individuals approach black. They may be solid color of any of these shades, or spotted with white. The muzzles and tongues are usually black or lead colored, but light-colored tongues are not uncommon, and around the muzzle is a white or mealy ring.

⁵ See footnote 1, p. 6.

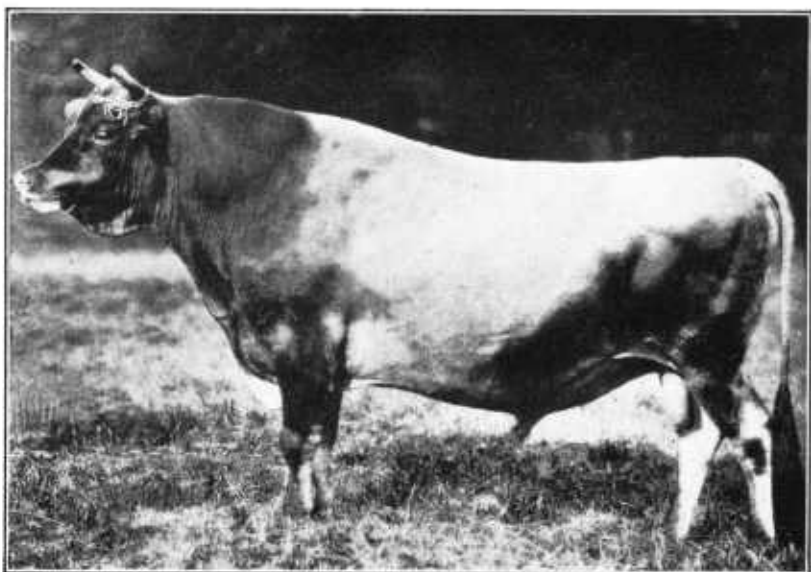


FIG. 20.—Jersey bull, Dairylike Majesty 198188. He has 125 daughters in the Register of Merit

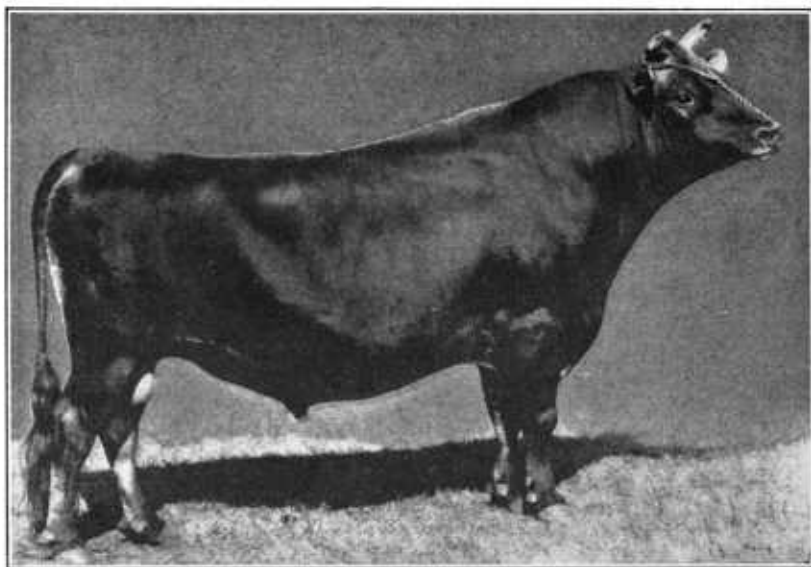


FIG. 21.—Jersey bull, Fern's Rochette Noble 193011. Grand champion, National Dairy Show, 1927

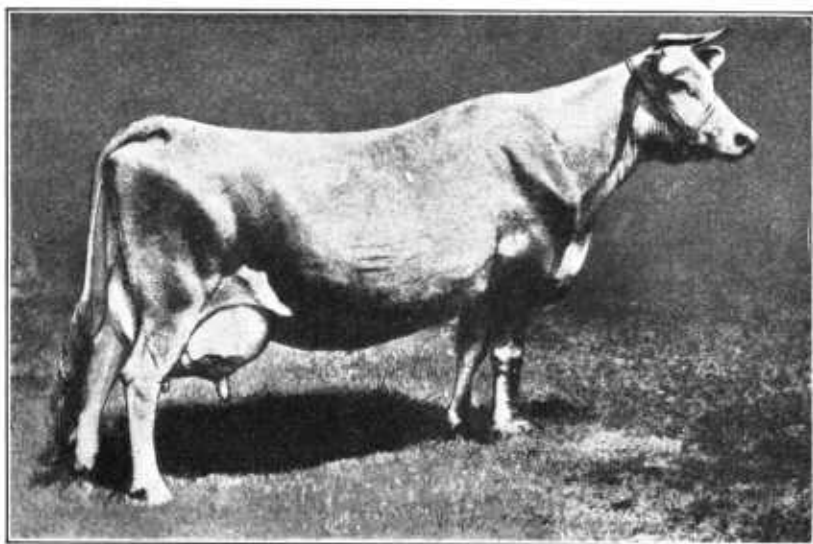


FIG. 22.—Jersey cow, Abagail of Hillside 457241. Champion milk and butterfat producer of the breed

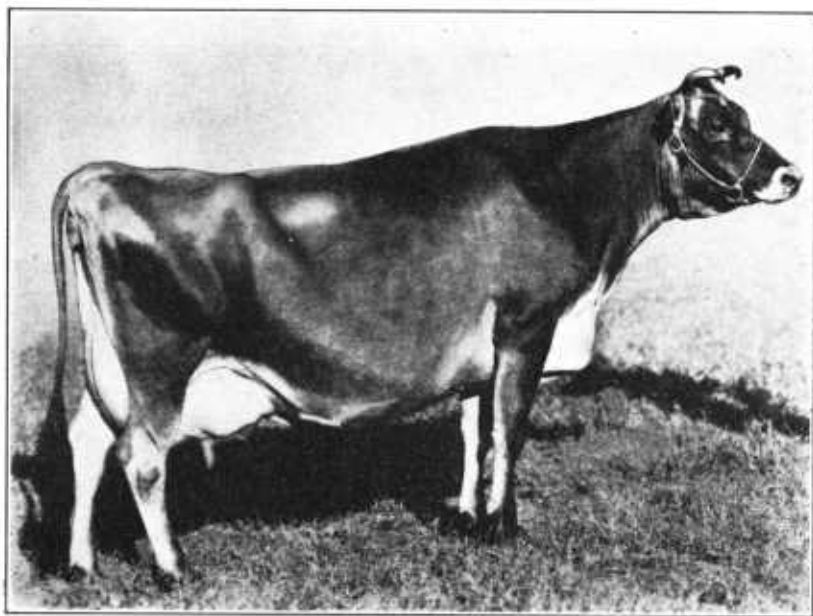


FIG. 23.—Jersey cow, Imp. Mytilda's Belle 699929. Grand champion, National Dairy Show, 1923

Scale of points for Jersey cow

DAIRY TEMPERAMENT AND CONSTITUTION

| | |
|---|----|
| Head, 7: | |
| A. Medium size, lean; face dished; broad between eyes; horns medium size, incurving..... | 3 |
| B. Eyes full and placid; ears medium size, fine, carried alert; muzzle broad, with wide-open nostrils and muscular lips; jaw strong.... | 4 |
| Neck, 4: | |
| Thin, rather long, with clean throat, neatly joined to head and shoulders.. | 4 |
| Body, 37: | |
| A. Shoulders light, good distance through from point to point, but thin at withers; chest deep and full between and just back of forelegs.. | 5 |
| B. Ribs amply sprung and wide apart, giving wedge shape, with deep, large abdomen, firmly held up, with strong, muscular development.. | 10 |
| C. Back straight and strong, with prominent spinal processes; loins broad and strong..... | 5 |
| D. Rump long to tail setting, and level from hip bones to rump bones.. | 6 |
| E. Hip bones high and wide apart..... | 3 |
| F. Thighs flat and wide apart, giving ample room for udder..... | 3 |
| G. Legs proportionate to size and of fine quality, well apart, with good feet, and not to weave or cross in walking..... | 2 |
| H. Hide loose and mellow..... | 2 |
| I. Tail thin, long, with good switch, not coarse at setting on..... | 1 |

MAMMARY DEVELOPMENT

| | |
|--|-----|
| Udder, 26: | |
| A. Large size, flexible, and not fleshy..... | 6 |
| B. Broad, level or spherical, not deeply cut between teats..... | 4 |
| C. Fore udder full and well rounded, running well forward of front teats.. | 10 |
| D. Rear udder well rounded, and well out and up behind..... | 6 |
| Teats, 8: | |
| Of good and uniform length and size, regularly and squarely placed.... | 8 |
| Milk veins, 4: | |
| Large, long, tortuous and elastic, entering large and numerous orifices.. | 4 |
| Size, 4: | |
| Mature cows, 800 to 1,000 pounds..... | 4 |
| General appearance, 10: | |
| A symmetrical balancing of all the parts, and a proportion of parts to one another, depending on size of animal, with the general appearance of a high-class animal, with capacity for feed and productiveness at pail.. | 10 |
| Total score..... | 100 |

PRODUCTION

Jersey milk is yellow and rich in butterfat. The 37,875 cows and heifers that had Register-of-Merit records up to January 1, 1929, averaged 8,466 pounds of milk and 453.09 pounds of butterfat a year, with an average test of 5.35 per cent.

The 10 highest butterfat and milk producers among the Jerseys are listed below.

Ten highest Jersey yearly butterfat and milk production records in the United States

| Butterfat production | | Milk production | |
|---------------------------------------|---------------|-------------------------------------|---------------|
| Cow | Butterfat | Cow | Milk |
| | <i>Pounds</i> | | <i>Pounds</i> |
| Abigail of Hillside 457241..... | 1, 197. 51 | Abigail of Hillside 457241..... | 23, 677 |
| Darling's Jolly Lassie 435948..... | 1, 141. 28 | Madeline of Hillside 389336..... | 20, 624 |
| Groff's Constance 367292..... | 1, 130. 09 | Fauvic's Star 313018..... | 20, 616 |
| Prince's Emma of H. S. F. 359390..... | 1, 109. 99 | Fauvic Ruth 385463..... | 19, 805 |
| Lad's Iota 350672..... | 1, 048. 07 | Passport 219742..... | 19, 695 |
| Fauvic Ruth 385463..... | 1, 047. 28 | Red Lady 396118..... | 19, 608 |
| Imperial Isabel 447661..... | 1, 045. 14 | Sybil's Miss May 477787..... | 19, 239 |
| Madeline of Hillside 389336..... | 1, 044. 05 | Lad's Likeness 338246..... | 19, 223 |
| Plain Mary 268206..... | 1, 040. 08 | Eminent's Jim's Owl 297471..... | 19, 099 |
| Vive La France 319616..... | 1, 039. 29 | Raleigh's Torono's Meme 544207..... | 19, 076 |

BULLS

The 10 Jersey sires having the largest number of daughters with official yearly records, up to January 1, 1929, are listed below.

Ten Jersey sires with largest number of daughters in Register of Merit

| Sire | Number of daughters | Sire | Number of daughters |
|---------------------------------------|---------------------|--|---------------------|
| Dairylike Majesty 198188..... | 125 | Sybil's Gamboge 174663..... | 83 |
| Pogis 99th of Hood Farm 94502..... | 121 | Hood Farm Pogis 9th 55552..... | 79 |
| Sophie 19th's Tormentor 113302..... | 88 | Hood Farm Torono 60326..... | 73 |
| Imported Oxford You'll Do 111860..... | 84 | Imported Golden Fern's Noble 145762..... | 66 |
| Royal Majesty of St. Cloud 89541..... | 83 | Irene's King Pogis 73182..... | 64 |

BREED ASSOCIATIONS

The various breed associations and clubs maintain offices and forces whose duty it is (1) to keep the herdbooks for their respective breeds; (2) to keep a record of the animals that have qualified for the additional registration because of meritorious performance; and (3) to further the interest of the breed in other ways. The official names of these organizations and their addresses are as follows:

- American Guernsey Cattle Club, Peterboro, N. H.
- American Jersey Cattle Club, 324 West Twenty-third Street, New York City.
- Ayrshire Breeders' Association of the United States of America, Brandon, Vt.
- Brown Swiss Cattle Breeders' Association, Beloit, Wis.
- Dutch Belted Cattle Association of America, Rockville, Conn.
- Holstein-Friesian Association of America, Brattleboro, Vt.